REMARKS

Favorable reconsideration of this application in light of the following discussion is respectfully requested.

Claims 1-2 are presently active in this case. The present amendment amends Claim 1 without introducing any new matter.

Claims 1-2 were rejected under 35 U.S.C. §102(e) as anticipated by Yoda et al. (U.S. Patent No. 6,256,591, herein "Yoda").

Regarding the references Yoda and Pu (U.S. Patent No. 6,268,610) cited in the outstanding Office Action on page 2, lines 17-19, the Examiner noted those references have common inventors and were not provided by Applicants. Applicants believe those references are not material regarding the patentability of the presented Claims 1-2. In that respect, Applicants believe all requirements under Rule 37 C.F.R. §1.56 have been complied with as the reference to Pu was not applied against those claims, and the reference to Yoda was misapplied against the claims, as discussed below.

For consistency with Claim 2 and Applicants' specification, the title and the preamble of Claim 1 are amended. In particular, the title is amended to recite "radiation treatment plan making system and method," and Claim 1 is amended to recite "a radiation treatment plan making system." Since these changes are supported by the specification as originally filed, they are not believed to raise a question of new matter.

In response to the rejection of Claims 1-2 under 35 U.S.C. §102(e), Applicants respectfully request reconsideration of this rejection and traverse the rejection, as discussed next.

Briefly recapitulating, Claim 1 relates to a radiation treatment plan making system. The system includes, *inter alia*, simulation means for executing radiation treatment simulation for dividing a radiation exposure region and a peripheral region thereof to be

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irradiated with particle beams into a plurality of unit radiation exposure regions, and then

applying particle beams according to a shape of each divided unit radiation exposure region;

and radiation treatment planning means for obtaining a radiation treatment condition for

causing flatness, making a radiation treatment plan reflecting the radiation treatment

condition, wherein the simulation means divides the radiation exposure region and the

peripheral region thereof into unit radiation exposure regions of grid forms whose size is set

according to a radiation beam size that is decided by an operation condition, which decides

the flatness, of the radiation treatment apparatus, and performs radiation treatment simulation

that simulates operation for applying radiation treatment for the unit radiation exposure

regions with a pitch of one half of one side of the grid as a step size. Independent Claim 2

recited similar features in the context of a radiation treatment plan making method.

Turning now to the applied reference, Yoda discloses a method of forming energy

distribution, wherein the ratio between an energy distribution vector U_p *is calculated* by using

a density distribution P, and a desired energy distribution vector V.[1] However, Yoda fails to

teach or suggest Applicants' claimed *"simulation means for executing radiation treatment*

simulation for dividing a radiation exposure region and a peripheral region thereof to be

irradiated with particle beams" (emphasis added). As explained in Applicants' Specification

from page 16, line 22 to page 17, line 25, a diseased part of a patient is photographed and

processed by the radiation treatment planning means, and the treatment simulation is

performed based on the diseased part. Yoda describes in the steps ST1 to ST5 a method of

calculating the energy distribution vectors between a minimal and maximal energy source

density q_{min}, q_{max}.[2] The distribution is calculated for m positions in *equal intervals* in the

space 10. Yoda explicitly teaches that field intensities e_j at the observation points 11 are

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[1] See Yoda in the Abstract.
[2] See Yoda in Figure 2.

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calculated theoretically.[3] Nowhere, however, does Yoda describe that the radiation

treatment is simulated based on a diseased part of a patient. Accordingly, calculating means

for computing radiation field intensities to maximize the pattern coincide degree γ, as taught

by Yoda, is not simulation means for executing radiation treatment simulation, as claimed.

Furthermore, Yoda fails to teach or suggest that the simulation means divides the

radiation exposure region into unit radiation exposure regions, whose size is *set according to*

a radiation beam size, as claimed. Yoda's Figure 3 shows a linear space in which charges q_i

to q_m are distributed.[4] However, Yoda explicitly teaches that m positions are defined in *equal*

intervals in the space 10 in which the charges q_i to q_m exist.[5] Accordingly, Yoda's size of a

unit radiation region is first fixed, and subsequently the intensity of an energy distribution is

varied, as explained in Yoda at column 5. Accordingly, a defined interval of a radiation

region with variable field intensities, as taught by Yoda, are not unit radiation exposure

regions, whose size is set according to a radiation beam size, as claimed by Applicants.

Applicants also respectfully submit that Yoda fails to teach or suggest the performing

of the simulation with *a pitch of one half of one side of the grid* as a step size. First, Yoda

does not perform any simulation of the radiation, as explained above, and second Yoda

defines a fixed grid for calculating the necessary radiation beam energy,[6] and subsequently an

energy distribution vector for the fixed grid is calculated and the fixed grid is irradiated.[7]

Accordingly, a number m of energy source setting positions, and calculating and irradiating

the required energy for these positions, as disclosed by Yoda, is not performing simulation

with *a pitch of one half of one side of the grid* as a step size.

In view of these foregoing comments, Applicants submit Yoda does not meet each

limitation of Claims 1-2.

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[3] See Yoda at column 5, lines 38-45.
[4] See Yoda at column 5, lines 8-16 and in corresponding Figure 3.
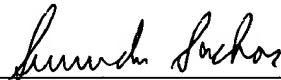[5] See Yoda at column 5, lines 31-32.
[6] See Yoda in Figure 2
[7] See Yoda at column 4, lines 47-67, and at column 10, lines 61-64 and in corresponding Figure 16.

Consequently, in view of the present Amendment, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal Allowance. A Notice of Allowance for Claims 1-2 is earnestly solicited.

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact Applicants' undersigned representative at the below listed telephone number.

Respectfully submitted,

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